

Title (en)
METHOD FOR PRODUCING EMULSIONS AND AQUEOUS POLYISOBUTENE EMULSION

Title (de)
VERFAHREN ZUR HERSTELLUNG VON EMULSIONEN UND WÄSSRIGEN POLYISOBUTENEMULSION

Title (fr)
PROCÉDÉ DE PRODUCTION D'ÉMULSIONS ET ÉMULSION AQUEUSE DE POLYISOBUTÈNE

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Application
EP 19202747 A 20191011

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Abstract (en)
The current invention concerns a method for preparing a polyisobutene (PiB) in water emulsion characterized by the steps :- combining a number of separate fluid streams of PiB and water with formation of alternating fluid lamellae of PiB and water,- focusing the alternating fluid lamellae of PiB and water with formation of a focused total fluid stream,- gradually tapering the cross-flow section of said focused total fluid stream in the direction of the flow in a manner that decays said alternating polyisobutene and water fluid lamellae.The current invention relates to a method for producing dispersions. The current invention also concerns the emulsions produced by said method. The current method also relates to polymer emulsions, particularly polyisobutene emulsions with a high content of polyisobutene.The current method also relates to a method for reducing the average droplet diameter of an emulsion, comprising the steps :- providing an emulsion, comprising droplets of a dispersed phase within a continuous phase, characterized by an average droplet diameter and a viscosity ratio of the dispersed phase to said continuous phase of at least 4.0, and- reducing said average droplet diameter by forcing said emulsion through a gradually tapered cross-flow section of in the direction of the flow in a manner that decays said alternating polyisobutene and water fluid lamellae.

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C08L 23/22 + C08L 91/00

Citation (applicant)

- WO 2014012888 A1 20140123 - EMULCO LAB C V B A [BE]
- WO 03006533 A1 20030123 - DOW CORNING [US], et al
- US 2004027915 A1 20040212 - LOWE HOLGER [DE], et al
- WO 03068381 A1 20030821 - INST MIKROTECHNIK MAINZ GMBH [DE], et al
- DE 19917156 A1 20001026 - INST MIKROTECHNIK MAINZ GMBH [DE]
- WO 2013165908 A1 20131107 - OREGON STATE [US]
- WO 2014012884 A1 20140123 - EMULCO LAB C V B A [BE]
- US 9636646 B2 20170502 - NEERINCX PETER [NL], et al
- US 2011275738 A1 20111110 - ENGEL ROBERT [DE], et al
- US 7153516 B2 20061226 - BOWEN-LEAVER HEATHER A [US], et al
- US 2008274073 A1 20081106 - BELL HUBERTUS PETER [DE], et al
- US 7767748 B2 20100803 - LEYRER REINHOLD J [DE], et al
- "Encyclopedia of Polymer Science and Technology", vol. 10, pages: 781 - 854

Cited by
EP4197778A1; WO2021205020A1

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